Goal 3: Land Preservation and Restoration

STRATEGIC GOAL: Preserve and restore the land by using innovative waste management practices and cleaning up contaminated properties to reduce risks posed by releases of harmful substances.

BACKGROUND AND CONTEXT

Left uncontrolled, hazardous and nonhazardous wastes on the land can migrate to the air, groundwater, and surface water, contaminating drinking water supplies, causing acute illnesses or chronic diseases, and threatening healthy ecosystems in urban, rural, and suburban areas. Hazardous substances can kill living organisms in lakes and rivers, destroy vegetation in contaminated areas, cause major reproductive complications in wildlife, and otherwise limit the ability of an ecosystem to survive.

MEANS AND STRATEGY

EPA will work to preserve and restore the land using the most effective waste management and cleanup methods available. EPA will use a hierarchy of approaches to protect the land: reducing waste at its source, recycling waste, and managing waste effectively by preventing spills and releases of toxic materials and cleaning up contaminated properties. The Agency is especially concerned about threats to our most sensitive populations, such as children, the elderly, and individuals with chronic diseases.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or Superfund)[1] and the Resource Conservation and Recovery Act (RCRA)[2] provide the legal authority for most of EPA's work toward this goal. The Agency and its partners use Superfund authority to clean up uncontrolled or abandoned hazardous waste sites; return the land to productive use; and maximize the participation of potentially responsible parties in cleanup efforts. Under RCRA, EPA works in partnership with states and Tribes to address risks associated with leaking underground storage tanks and with the generation and management of hazardous and non-hazardous wastes.

EPA also uses authorities provided under the Clean Air Act,[3] Clean Water Act,[4] and Oil Pollution Act of 1990[5] to protect against spills and releases of hazardous materials. Controlling the many risks posed by accidental and intentional releases of harmful substances presents a significant challenge to protecting the land. EPA's approach integrates prevention, preparedness, and response activities to minimize these risks. Spill prevention activities keep harmful substances from being released to the environment. Improving its readiness to respond to emergencies, through training, development of clear authorities, and provision of proper equipment, will ensure that EPA is adequately prepared to minimize contamination and harm to the environment when spills do occur.

In FY 2005, EPA will maintain its focus on three themes established in FY 2004, and one additional theme on emergency preparedness, response and homeland security, in achieving its objectives:

- Recycling, Waste Minimization and Energy Recovery: EPA's strategy for reducing waste generation and increasing recycling is based on (1) establishing and expanding partnerships with businesses, industries, states, communities, and consumers; (2) stimulating infrastructure development, environmentally responsible behavior by product manufacturers, users, and disposers ("product stewardship"), and new technologies; and (3) helping businesses, government, institutions, and consumers by education, outreach, training, and technical assistance.

- One Cleanup Program: Through the "One Cleanup Program" the Agency is looking across its programs to bring consistency and enhanced effectiveness to site cleanups. The Agency will work with its partners and stakeholders to enhance coordination, planning, and

[1] 42 U.S. Code 9601-9675

[2] 42 U.S. Code 6901-6992k

[3] 42 U.S. Code 7401-7671q

[4] 33 U.S. Code 1251-1387

[5] 33 U.S. Code 2701-2761

communication across the full range of Federal, state, Tribal, and local cleanup programs. This effort will improve the pace, efficiency, and effectiveness of site cleanups, as well as more fully integrate land reuse and continued use into cleanup programs. The Agency will promote information technologies that describe waste site cleanup and revitalization information in ways that keep the public and stakeholders fully informed. Finally, the Agency will develop environmental outcome performance measures that report progress among all cleanup programs, such as the number of acres able to be reused after site cleanup. A crucial element to this effort is a national dialogue, currently underway, on the future of Superfund and other EPA waste cleanup programs.

- Revitalization: The Agency's broad promotion of the successes of the Brownfields and other waste programs focuses on restoring and revising contaminated lands. The Land Revitalization Initiative complements the Agency's traditional cleanup programs by focusing on solutions that improve the quality of life and economy of affected communities. Front end planning for the final, productive use of contaminated lands enables the cleanup programs, communities and interested stakeholders to more easily and quickly make cleanup decisions. This integration of land reuse planning with the traditional cleanup processes will lead to faster, more efficient cleanups.

- Emergency Preparedness, Response, and Homeland Security: EPA has a major role in reducing the risk to human health and the environment posed by accidental or intentional releases of harmful substances and oil. EPA will work to improve its ability to effectively respond to these incidents, working closely with other federal agencies within the National Response System.

Reducing and Recycling Waste

The Resource Conservation Challenge (RCC) represents a major national effort to find flexible yet protective ways to conserve our valuable natural resources by reducing waste, recycling, and recovering energy.[6] Through the RCC, EPA challenges all Americans to make purchasing and disposal decisions that conserve natural resources, save energy, reduce costs, and preserve the environment for future generations.

Establishing and Expanding Partnerships: EPA will establish and expand its partnerships with industry, states, and other entities to reduce waste and to develop and deliver tools that can help businesses, manufacturers, and consumers. Nationally-recognized programs, such as WasteWise,[7] which uses partnerships to encourage waste prevention and recycling, will serve as models for new alliances among federal, state, and local governments and businesses that capitalize on voluntary efforts to reduce waste and increase recycling.

EPA will also continue to help its Tribal partners improve practices for managing solid waste on Indian lands. EPA has direct implementation responsibility for the RCRA hazardous waste and Underground Storage Tank programs in Indian country. Recognizing the unique challenges encountered in Indian country, EPA will work with Tribes on a government-to-government basis that affirms the federal government's vital trust responsibility and the importance of conserving natural resources for cultural uses. EPA will conduct joint projects to upgrade Tribal solid waste management infrastructure, developing plans, codes and ordinances, recycling programs, and other alternatives to open dumping. These efforts will help to prevent open dumping in Indian country in the future and allow clean up of existing dumps, reducing the risks that such dumps pose to human health and the environment.

Stimulating Infrastructure Development, Product Stewardship, and New Technologies: Another key strategy for reducing waste is fostering development of infrastructure that will make it easier for businesses and consumers to reduce the waste they generate; acquire and use recycled materials; and purchase products containing recovered materials. For example, EPA has established voluntary product stewardship partnerships with manufacturers, retailers, governmental, and

[6] U.S. Environmental Protection Agency, Office of Solid Waste. Resource Conservation Challenge Web Site: http://www.epa.gov/epaoswer/osw/conserve/index.htm. Washington, D.C. Last updated August 21, 2003.

[7] U.S. Environmental Protection Agency, Office of Solid Waste. WasteWise Program Web Site, About Waste Wise Page: http://www.epa.gov/wastewise/wrr/cbuild.htm. Washington, D.C. Last updated September 27, 2002.

nongovernmental organizations to reduce the impacts that electronics and carpets can have on the environment throughout their lifecycles. EPA continues to promote the development of new and better recycling technologies and explore ways to obtain energy or products from waste.

Providing Education, Outreach, Training, and Technical Assistance: EPA works with major retailers, electronics manufacturers, and the amusement and motion picture industries to revitalize, create, and display conservation, waste prevention, and recycling messages. These activities encourage smarter, more environmentally responsible behavior by consumers, young people, and underserved communities. The Agency and its partners design activities that encourage students and teachers to start innovative recycling programs and develop unique tools and projects to promote waste reduction, recycling, and neighborhood revitalization in Hispanic and African-American communities and on Indian lands.

Managing Hazardous Wastes and Petroleum Products Properly

Recognizing that some hazardous wastes cannot yet be completely eliminated or recycled, the RCRA program works to reduce the risks of exposure to hazardous wastes by maintaining a "cradle-to-grave" approach to waste management.

Preventing Hazardous Releases from RCRA Facilities: EPA's strategy for addressing hazardous wastes that must be treated or stored is to achieve greater efficiencies at waste management facilities through more focused permitting processes and tighter standards where appropriate. EPA works with state, Tribal, and local government partners to ensure that hazardous waste management facilities have approved controls in place and continues to strive for safe waste management.

EPA will work with the authorized states—specifically those with a large number of facilities lacking approved controls in place— to resolve issues and transfer best practices from other states. EPA also plans to study the universe of unpermitted facilities and work with states to identify and resolve issues that may be preventing key categories of facilities from obtaining permits or putting other approved controls in place. To achieve greater efficiencies at facilities that treat or store hazardous waste, the Agency will promote innovative technologies that streamline permitting processes and improve protection of human health and the environment.

Reducing Emissions from Hazardous Waste Combustion: EPA continues to develop and issue regulations on emission standards for hazardous waste combustion facilities. Implementation of these regulations is key to reducing the emission of dioxins, furans, particulate matter, and acid gases. Within 2 years from the date when EPA issues new limits, facilities will conduct emission tests to demonstrate reductions. Additional periodic tests will ensure continued compliance with the limits established for emissions.

Preventing Releases from Underground Storage Tank Systems: EPA recognizes that the size and diversity of the regulated community put state authorities in the best position to regulate Underground Storage Tanks (USTs) and to set priorities. RCRA Subtitle I allows state UST programs approved by EPA to operate in lieu of the federal program.[8] Except in Indian country, even states that have not received formal state program approval from EPA are in most cases the primary implementing agencies and receive annual grants from EPA.

While the frequency and severity of releases from UST systems have been greatly reduced, EPA and its state partners have observed that releases are still occurring. EPA will continue to work with its state and Tribal partners to prevent and detect petroleum releases from USTs by ensuring that compliance with detection prevention requirements (spill, overfill, and corrosion protection) are a national priority. While the vast majority of the approximately 683,000 active USTs have the regulatory equipment, significant work remains to ensure that UST owners and operators maintain and operate their systems properly.[9] In FY 2005, the Agency will continue its performance evaluation of new or upgraded UST systems to better and more quickly identify releases and their causes. The Agency will also continue to identify opportunities for improving UST system performance.

To protect our Nation's groundwater and drinking water from petroleum releases, EPA will

[8] 42 U.S. Code 9601-6992k

[9] Memorandum from Cliff Rothenstein, Director, EPA Office of Underground Storage Tanks to Underground Storage Tank Division Directors in EPA Regions 1-10. June 19, 2003. F^ 2003 Semi Annual (Mid-Year) Activity Report

continue to support state programs; strengthen partnerships among stakeholders; and provide technical and compliance assistance, and training to promote and enforce UST facilities' compliance. In addition, EPA will continue its work to obtain states' commitments to increase their inspection and enforcement presence if state-specific goals are not met. The Agency and states will use innovative compliance approaches, along with outreach and education tools, to bring more tanks into compliance.

The Agency will also provide guidance to foster the use of new technology to enhance compliance. For example, the presence of methyl-tertiary-butyl-ether (MTBE) in gasoline increases the importance of preventing and rapidly detecting releases, since MTBE cleanups can cost 100 percent more than cleanups involving other gasoline contaminants.[10] The Agency will focus its efforts on reducing UST releases and increasing early detection of petroleum products, including MTBE, by further evaluating the performance of compliant UST systems.

Preparing for and Responding to Emergencies

EPA plays a major role in reducing the risks that accidental and intentional releases of harmful substances and oil pose to human health and the environment. Under the National Response System (NRS), EPA evaluates and responds to thousands of releases annually. The NRS is a multi-agency preparedness and response mechanism that includes the following key components: the National Response Center, the National Response Team (NRT) which is composed of 16 Federal agencies, 13 Regional Response Teams, and Federal On-Scene Coordinators (OSCs). These organizations work with state and local officials to develop and maintain contingency plans that will enable the Nation to respond effectively to hazardous substance and oil emergencies. When an incident occurs, these groups coordinate with the OSC in charge to ensure that all necessary resources, such as personnel and equipment, are available and that containment, cleanup, and disposal activities proceed quickly, efficiently, and effectively. EPA's primary role in the NRS is to serve as the Federal OSC for spills and releases in the inland zone. As a result of NRS efforts, the Nation has successfully contained many major oil spills and releases of hazardous substances, minimizing the adverse impacts on human health and the environment.

Preparing for Emergencies: Preparedness on a national level is essential to ensure that emergency responders are able to deal with multiple, large-scale emergencies, including those that may involve chemicals, oil, biological agents, or radiological incidents. Over the next several years, EPA will enhance its core emergency response program to respond quickly and effectively to chemical, oil, biological, and radiological releases. EPA also will improve coordination mechanisms to respond to simultaneous, large-scale national emergencies, including homeland security incidents. The Agency will focus its efforts on Regional Response Teams and coordination among Regions; health and safety issues, including provision of clothing that protects and identifies responders, training, and exercise; establishment of delegation and warrant authorities; and response readiness, including equipment, transportation, and outreach. The criteria for excellence in the core emergency response program will ensure a high level of overall readiness throughout the Agency and improve its ability to support multi-Regional responses.

In addition to enhancing its readiness capabilities, EPA will work to improve internal and external coordination and communication mechanisms. For example, as part of the National Incident Coordination Team, EPA will continue to improve its policies, plans, procedures, and decision-making processes for coordinating responses to national emergencies. Under the Continuity of Operations/Continuity of Government program, EPA will upgrade and test plans, facilities, training, and equipment to ensure that essential government business can continue during a catastrophic emergency. NRT capabilities are being expanded to coordinate interagency activities during large-scale responses. EPA will coordinate its activities with the Department of Homeland Security, Federal Emergency Management Administration (FEMA), Federal Bureau of Investigation (FBI), other Federal agencies, and state and local governments. EPA will also continue to clarify its roles and responsibilities so that Agency security programs are consistent with the national homeland security strategy.

Responding to Hazardous Substance Releases and Oil Spills: Each year, EPA personnel assess, respond to, mitigate, and clean up thousands of releases, whether accidental, deliberate, or naturally occurring. These incidents range from

[10] New England Interstate Water Pollution Control Commission. 2000. A Survey of Site Experiences with MTBE Contamination at LUST Sites. Web Site: http:// epa.gov/superfund/sites/npl/current.

small spills at chemical or oil facilities to national disasters, such as hurricanes and earthquakes, to terrorist events like the 2001 World Trade Center and anthrax attacks, to the 2003 Columbia shuttle tragedy.

EPA will work to improve its capability to respond effectively to incidents that may involve harmful chemical, oil, biological, and radiological substances. The Agency will explore improvements in field and personal protection equipment and response training and exercises; review response data provided in the "after-action" reports prepared by EPA emergency responders following a release; and examine "lessons learned" reports to identify which activities work and which need to be improved. Application of this information and other data will advance the Agency's state-of-the-art emergency response operations.

Preventing Oil Spills: An important component of EPA's land strategy is to prevent oil spills from reaching the Nation's waters. Under the Oil Pollution Act,[11] the Agency requires certain facilities (defined in 40 CFR 112.2) to develop and implement spill prevention, control, and countermeasure (SPCC) plans. SPCC plans ensure that facilities put in place containment and other countermeasures to prevent oil spills from reaching navigable waters. Facilities that are unable to provide secondary containment, such as berms around an oil storage tank, must provide a spill contingency plan that details cleanup measures to be taken if a spill occurs. Compliance with these requirements reduces the number of oil spills that reach navigable waters and prevents detrimental effects on human health and the environment should a spill occur.

Controlling Risks to Human Health and the Environment at Contaminated Sites

Leaching contaminants can foul drinking water in underground aquifers used for wells or surface waters used by public water intakes. Contaminated soil can result in human ingestion or dermal absorption of harmful substances. Contamination can also affect subsistence resources, including resources subject to special protections through treaties between Federal and Tribal governments. Furthermore, because of the risks it poses, contaminated land may not be available for use.

EPA and its partners work to clean up contaminated land to levels sufficient to control risks to human health and the environment and to return the land to productive use. The Agency's cleanup activities, some new and some well-established, include removing contaminated soil, capping or containing contamination in place, pumping and treating groundwater, and bioremediation.

EPA uses a variety of tools to accomplish cleanups: permits, enforcement actions, consent agreements, Federal Facility Agreements, and many other mechanisms. As part of EPA's One Cleanup Program Initiative, all levels of government will work together to ensure that appropriate cleanup tools are used; that resources, activities, and results are coordinated with partners and stakeholders and communicated to the public effectively; and that cleanups are protective and contribute to community revitalization. This approach reflects EPA's efforts to coordinate across all of its cleanup programs, while maintaining the flexibility needed to accommodate differences in program authorities and approaches.

EPA fulfills its cleanup and waste management responsibilities on Tribal lands by acknowledging Tribal sovereignty and recognizing Tribal governments as being the most appropriate authorities for setting standards, making policy decisions, and managing programs consistent with Agency standards and regulations.

Through strong policy, leadership, program administration, and a dedicated workforce, EPA's cleanup programs will merge sound science, cutting-edge technology, quality environmental information, and stakeholder involvement to protect the Nation from the harmful effects of contaminated property. To accomplish its cleanup goals, the Agency continues to forge partnerships and develop outreach and education strategies.

EPA and its partners follow four key steps to accomplish cleanups and control risks to human health and the environment: assessment, stabilization, selection of appropriate remedies, and implementation of remedies. The Agency will continue to work with Federal, state, Tribal, and local government partners at each step of the process to identify facilities and sites requiring attention and to monitor changes in priorities. For example, EPA is collecting Tribal program baseline data for the Superfund program and will modify the Superfund data system to more accurately track sites of concern to Tribes, along with those situated on Indian lands.

[11] 33 U.S. Code,6901-6992k

As systems and approaches change, cleanup programs will revise guidance appropriately.

Usable land is a valuable resource. However, where contamination presents a real or perceived threat to human health and the environment, options for future land use at that site may be limited. EPA's cleanup programs have set a national goal of returning formerly contaminated sites to long-term, sustainable, and productive use. This goal creates greater impetus for selecting and implementing remedies that, in addition to providing clear environmental benefits, will support future land use providing greater economic and social benefits.

Maximizing Potentially Responsible Party Participation at Superfund Sites:

Enforcement authorities play a critical role in all Agency cleanup programs. However, they have an additional and unique role under the Superfund program: they are used to leverage private-party resources to conduct a majority of the cleanup actions and to reimburse the federal government for cleanups financed by the Trust Fund. EPA will continue to pursue the following two strategies for limiting the use of trust funds.

Applying Superfund "Enforcement First": Historically, EPA has achieved at least $6 in private-party cleanup commitments for every $1 spent on enforcement. The Agency will continue to use its enforcement authorities to achieve this end. The Superfund program's "Enforcement First" strategy will allow EPA to focus limited Trust Fund resources on sites where viable, potentially responsible parties either do not exist or lack the funds or capabilities to conduct the cleanup. By taking enforcement actions at sites where viable, liable parties do exist, EPA will continue to leverage private-party dollars so that Trust Fund money is used only when absolutely necessary to clean up hazardous waste sites.

Recovering Costs: Cost recovery is another way to leverage private-party resources through enforcement. Under Superfund, EPA has the authority to compel private parties to pay back Trust Fund money spent to conduct cleanup activities. EPA will continue its efforts to address 100 percent of the Statute of Limitations cases for Superfund sites with unaddressed total past costs equal to or greater than $200,000 and to report the value of costs recovered.

Research

The FY 2005 land research program supports the Agency's objective of reducing or controlling potential risks to human health and the environment at contaminated waste sites by accelerating scientifically-defensible and cost-effective decisions for cleanup at complex sites, mining sites, marine spills, and Brownfields in accordance with the Comprehensive Environmental Response, Compensation, and Liabilities Act (CERCLA).

The Agency will conduct research to: 1) improve the range and scientific foundation for contaminated sediment remedy selection options through improved site characterization, and increased understanding of different remedial options; 2) determine the performance and cost benefit of alternative groundwater remediation technologies and provide tools for characterizing and assessing groundwater contamination to program offices for use in state and local remedial decisions; 3) provide tools and methods that will allow the Agency to accurately and efficiently assess, remediate, and manage soil and land contamination; and 4) provide tools, methods, and models, and technical support to characterize the extent of multimedia site contamination.

Multimedia decision-making, waste management, and combustion constitute the three major areas of research under the Resource Conservation and Recovery Act (RCRA) in FY 2005, as the Agency works toward preventing releases through proper facility management. Multimedia research will focus on resource conservation (e.g., electronic waste recycling and waste-derived products), corrective action, and multimedia modeling. Waste management research will develop more cost-effective ways to manage/recycle non-hazardous wastes and will examine other remediation technologies, while combustion research will continue to focus on characterizing and controlling emissions from bioreactors and industrial combustion systems.

Several mechanisms are in place to ensure a high-quality waste research program at EPA. The Research Strategies Advisory Committee (RSAC) of EPA's Science Advisory Board (SAB), an independent chartered Federal Advisory Committee Act (FACA) committee, meets annually to conduct an in-depth review and analysis of EPA's Science and Technology account. The RSAC provides its findings to the House Science Committee and sends a written report on the findings to EPA's Administrator after every annual review. Moreover, EPA's Board of Scientific Counselors (BOSC) provides counsel to

the Assistant Administrator for the Office of Research and Development (ORD) on the operation of ORD's research program. Also, under the Science to Achieve Results (STAR) program, all research projects are selected for funding through a rigorous competitive external peer review process designed to ensure that only the highest quality efforts receive funding support. Our scientific and technical work products must also undergo either internal or external peer review, with major or significant products requiring external peer review. The Agency's Peer Review Handbook (2nd Edition) codifies procedures and guidance for conducting peer review.

STRATEGIC OBJECTIVES AND FY 2005 ANNUAL PERFORMANCE GOALS

Preserve Land. By 2008, reduce adverse effects to land by reducing waste generation, increasing recycling, and ensuring proper management of waste and petroleum products at facilities in ways that prevent releases.

Restore Land. By 2008, control the risks to human health and the environment by mitigating the impact of accidental or intentional releases and by cleaning up and restoring contaminated sites or properties to appropriate levels.

Enhance Science and Research. Through 2008, provide and apply sound science for protecting and restoring land by conducting leading-edge research and developing a better understanding and characterization of environmental outcomes under Goal 3.

HIGHLIGHTS

In FY 2005, EPA and its partners will preserve and restore the land by reducing, recycling, and managing wastes, preventing and responding to releases of harmful substances, and cleaning up contaminated land. The following accomplishments are examples of what has been done by the Agency to achieve these purposes:

- completed 303,120 cleanups of confirmed releases from Federally-regulated LUSTs since 1987;
- conducted over 7,900 removal response actions from 1982 through January 6, 2004;
- completed clean up construction at 890 Superfund National Priorities List Sites through January 6, 2004;
- assessed over 45,300 potential Superfund sites through January 6, 2004;
- removed more than 33,400 sites from the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) waste site list;
- responded to or monitored 300 oil spills in a typical year;
- 699 construction projects are ongoing at over 430 sites;
- expanded the Waste Wise Partnership to more than 1,300 partners who recycled over 9 million tons of waste, and prevented over 400,000 tons of waste;
- enrolled 50 Coal Combustion Products Partners, who are investigating ways to increase the use of coal combustion products (CCPs) in construction and to promote other beneficial uses of CCPs;
- determined that an investment of $1 million in Jobs Through Recycling grants helped businesses create more than 1,700 jobs and $290 million in capital investment;
- provided over $6.0 million to thirty-one Tribes to clean up open dumps and $3.1 million to 47 Tribes to develop hazardous waste management programs through the Tribal Solid Waste Interagency Workgroup;
- developed e-permitting tools to expedite and simplify the permitting process and provide better public access to permitting information;
- financial assurance regulations reduced the number of sites that must be cleaned up under either state or Federal authorities (such as Superfund removals) by requiring facilities to have financial assurance for third party liability, closure, and completion of corrective action;

- 83 percent of hazardous waste facilities have approved controls (permits) in place, exceeding the 2005 goal of 80 percent;

- the "worst facilities first" strategy resulted in over 1,200 facilities achieving the Current Human Exposures Under Control environmental indicator goal and over 1,000 facilities achieving the Migration of Contaminated Groundwater Under Control environmental indicator goal;

- secured greater than $20 billion in PRP commitments, through response and cost recovery settlements, over the life of the Superfund program; and

- resolved potential liability of 24,700 small volume waste contributing parties through more than 475 de minimis settlements.

In FY 2005, contaminated sites research will: 1) reduce uncertainties associated with soil/groundwater sampling and analysis; 2) reduce the time and cost associated with site characterization and site remediation activities; and 3) develop and demonstrate more effective and less costly remediation technologies involving complex sites and hard-to-treat wastes. Other proposed work will enhance and accelerate current contaminated sediments research efforts, providing the data needed to make and support crucial decisions on high impact and high visibility sites. The Superfund Innovative Technology Evaluation (SITE) program fosters the development and use of lower cost and more effective characterization and monitoring technologies, as well as risk management remediation technologies for sediments, soils, and groundwater. In FY 2005, EPA will complete at least four SITE demonstrations, with emphasis on non-aqueous phase liquids (NAPLs) and sediments.

Waste management research in FY 2005 will work to advance the multimedia modeling and uncertainty/sensitivity analyses methodologies that support core RCRA program needs as well as emerging RCRA resource conservation needs. Waste management research will also be conducted to improve the management of both solid and hazardous wastes.

EXTERNAL FACTORS

EPA's ability to respond as the Federal On-Scene Coordinator for releases of harmful substances in the inland zone will be affected by several external factors. The National Response System ensures that EPA will respond when necessary, but relies heavily on the ability of responsible parties and state, local, and Tribal agencies to respond to most emergencies. The need for EPA to respond is a function of the quantity and severity of spills that occur, as well as the capacity of state, local, and Tribal agencies to address spills.

EPA's ability to respond to homeland security incidents may be affected by circumstances surrounding each event. For instance, if travel or communication is severely impeded, EPA's response may be delayed and its efficiency compromised. Also, in the case of a single large-scale incident, removal program resources will most likely be concentrated on that response, thus reducing EPA's ability to address other emergency releases. In severe cases, EPA's current emergency response workforce and resources may not be sufficient to address a large number of simultaneous large-scale incidents.

A number of external factors could also affect the Agency's ability to achieve its objectives for cleanup and prevention. These factors include Agency reliance on private-party response and state and Tribal partnerships, development of new environmental technologies, work by other Federal agencies, and statutory barriers. Achieving the release prevention objectives and attaining FY 2005 targets will depend heavily on the participation of states that have been authorized or approved to be the primary implementors of these programs.

Attaining EPA's waste reduction and recycling objectives will depend on the participation of Federal agencies, states, Tribes, local governments, industries, and the general public in partnerships aimed at reducing waste generation and increasing recycling rates. EPA provides national leadership in the areas of waste reduction and recycling to facilitate public and private partnerships that can provide the impetus for government, businesses, and citizens to join in the campaign to significantly reduce the amount of waste generated and ultimately sent for disposal. Further, both domestic and foreign economic stresses can adversely affect markets for recovered materials.

State programs are primarily responsible for implementing the RCRA Hazardous Waste and UST

programs. EPA's ability to achieve its goals for these programs depends on the strength of state programs, including the level of funding contributed by states to these programs.

The Agency's ability to achieve its goals for Superfund construction completion is partially dependent upon the performance of cleanup activities by the Department of Defense (DOD) and the Department of Energy (DOE). In addition to construction completion, the Agency must rely on the efforts of DOD and DOE to establish and maintain Restoration Advisory Boards (RABs) and Site Specific Advisory Boards (SSABs). RABs and SSABs provide a forum for stakeholders to offer advice and recommendations on the restoration of Federal Facilities. Program success also partly depends on private party response and State partnerships, development of new environmental technology, work by other federal agencies, and statutory barriers. Further, EPA also coordinates its activities with other entities, such as PRP negotiations and agreements with states and Tribes.

Resource Summary
(Dollars in thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Land Preservation and Restoration	**$1,706,796.3**	**$1,779,473.5**	**$1,798,171.0**	**$18,697.5**
Preserve Land	$205,443.3	$210,990.1	$237,149.8	$26,159.7
Restore Land	$1,454,821.4	$1,508,646.8	$1,503,465.6	($5,181.3)
Enhance Science and Research	$46,531.6	$59,836.6	$57,555.6	($2,280.9)
Total Workyears	4,675.2	4,744.8	4,708.5	-36.4

OBJECTIVE: Preserve Land

By 2008, reduce adverse effects to land by reducing waste generation, increasing recycling, and ensuring proper management of waste and petroleum products at facilities in ways that prevent releases.

Resource Summary
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Preserve Land	**$205,443.3**	**$210,990.1**	**$237,149.8**	**$26,159.7**
Environmental Program & Management	$115,732.5	$121,103.9	$121,177.4	$73.5
Science & Technology	$950.0	$0.0	$0.0	$0.0
Building and Facilities	$1,398.3	$1,478.0	$1,571.1	$93.1
State and Tribal Assistance Grants	$85,944.2	$86,436.9	$112,236.9	$25,800.0
Leaking Underground Storage Tanks	$466.5	$809.4	$807.8	($1.6)
Inspector General	$951.6	$1,161.9	$1,356.6	$194.7
Total Workyears	717.7	740.9	725.4	-15.5

Program Project
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Categorical Grant: Tribal General Assistance Program	$364.9	$0.0	$0.0	$0.0
Congressionally Mandated Projects	$2,252.2	$0.0	$0.0	$0.0
Categorical Grant: Hazardous Waste Financial Assistance	$73,923.5	$74,486.9	$74,286.9	($200.0)
Categorical Grant: Underground Storage Tanks	$11,655.8	$11,950.0	$37,950.0	$26,000.0
Compliance Assistance and Centers	$401.9	$586.5	$585.3	($1.2)
LUST / UST	$6,765.8	$7,144.2	$7,094.5	($49.7)
RCRA: Waste Management	$59,706.6	$67,381.6	$67,422.3	$40.7
RCRA: Waste Minimization & Recycling	$12,107.4	$8,637.4	$10,107.9	$1,470.5
Administrative Projects	$38,265.2	$40,803.5	$39,702.9	($1,100.6)
TOTAL	**$205,443.3**	**$210,990.1**	**$237,149.8**	**$26,159.7**

ANNUAL PERFORMANCE GOALS AND MEASURES

GOAL: LAND PRESERVATION AND RESTORATION

OBJECTIVE: PRESERVE LAND

Municipal Solid Waste Source Reduction

In 2005 Divert an additional 1% (for a cumulative total of 35% or 81 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.5 pounds per day.

In 2004 Divert an additional 1% (for a cumulative total of 34% or 79 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.5 pounds per day.

In 2003 End of year FY 2003 data will be available in December 2005 to verify that an additional 1% (for a cumulative total of 32% or 74 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.5 pounds per day was diverted.

Performance Measures:	**FY 2003 Actuals**	**FY 2004 Pres. Bud.**	**FY 2005 Pres. Bud.**	
Millions of tons of municipal solid waste diverted.	Data available in December 2005	79	81	million tons
Daily per capita generation of municipal solid waste.	Data available in December 2005	4.5	4.5	lbs. MSW

Baseline: An analysis conducted in FY 2001 shows approximately 68 million tons (29.2%) of municipal solid waste diverted and 4.4 lbs of MSW per person daily generation. While data indicate that the growth in recycling rates has slowed, the target of a 35% recycling rate is being maintained.

Waste and Petroleum Management Controls

In 2005 Reduce releases to the environment by managing hazardous wastes and petroleum products properly.

In 2004 Reduce releases to the environment by managing hazardous wastes and petroleum products properly.

In 2003 For UST facilities, 72% are in operational compliance with leak detection, and 79% are in operational compliance with spill prevention requirements. An additional 4.1% of the RCRA facilities have permits or approved controls.

Performance Measures:	**FY 2003 Actuals**	**FY 2004 Pres. Bud.**	**FY 2005 Pres. Bud.**	
Percent increase of RCRA hazardous waste management facilities with permits or other approved controls.	4.1%	2.4%	2.8%	percentage pts.
Number of confirmed UST releases nationally.		<10,000	<10,000	UST releases
Increase in UST facilities in significant operational compliance with leak detection requirements.	-8%	4%	Not applicable	percentage pts.
Increase in UST facilities in significant operational compliance with spill, overfill and corrosion protection regulations.	-6%	4%	Not applicable	percentage pts.
Percent increase of UST facilities in significant operational compliance with both detection and release prevention (spill overflow, corrosion protection) requirements.			1%	percent

Baseline: EPA did not increase by 3% to 80% for the leak detection requirements or with spill, overfill and corrosion protection requirements by 3% to 85% in FY 2003. The FY 2003 actuals were 72% for UST facilities in significant operational compliance with leak detection requirements; 79% for UST facilities in significant operational compliance with spill, overfill and corrosion protection. Although the Agency has been working with the states to improve their reporting of both measures, the compliance rates for both have been steady or declining. There is some variability in reporting by states because some states have more stringent requirements, while other states have targeted non-compliant UST facilities so the facilities that are inspected are not representative of all facilities in the state. A baseline for the new combined measure will be determined in FY 2004, and is currently estimated to be approximately 60%. Between FY 1999 and FY 2003, confirmed UST releases averaged 13,600. By the end of FY 2003, 83.1% of approximately 2,750 RCRA facilities had permits or other approved controls in place.

VERIFICATION AND VALIDATION OF PERFORMANCE

FY 2005 Performance Measure:

- **Daily per capita generation**
- **Millions of tons municipal solid waste diverted**

Performance Database: Data are provided by the Department of Commerce. EPA does not maintain a database for this information.

Data Source: The baseline numbers for municipal solid waste source reduction and recycling are developed using a materials flow methodology employing data largely from the Department of Commerce and described in the EPA report titled "Characterization of Municipal Solid Waste in the United States." The Department of Commerce collects solid waste generation and recycling rate data from various industries.

Methods, Assumptions and Suitability: Data on domestic production of materials and products are compiled using published data series. U.S. Department of Commerce sources are used, where available; but in several instances more detailed information on production of goods by end-use is available from trade associations. The goal is to obtain a consistent historical data series for each product and/or material. Data on average product lifetimes are used to adjust the data series. These estimates and calculations result in material-by-material and product-by-product estimates of MSW generation, recovery, and discards.

There are various assumptions factored into the analysis to develop estimates of MSW generation, recovery and discards. Example assumptions (from pages 141-142 of year 2000 "Characterization Report" include: Textiles used as rags are assumed to enter the waste stream the same year the textiles are discarded. Some products (e.g., newspapers and packaging) normally have short lifetime; products are assumed to be discarded in the year they are produced.

QA/QC Procedures: Quality assurance and quality control are provided by the Department of Commerce's internal procedures and systems. The report prepared by the Agency, "Characterization of Municipal Solid Waste in the United States," is then reviewed by a number of experts for accuracy and soundness.

Data Quality Review: The report, including the baseline numbers and annual rates of recycling and per capita municipal solid waste generation, is widely accepted among experts.

Data Limitations: Data limitations stem from the fact that the baseline statistics and annual rates of recycling and per capita municipal solid waste generation are based on a series of models, assumptions, and extrapolations and, as such, are not an empirical accounting of municipal solid waste generated or recycled.

Error Estimate: N/A. Currently, the Office of Solid Waste (OSW) does not collect data on estimated error rates.

New/Improved Data or Systems: Because the statistics on MSW generation and recycling are widely reported and accepted by experts, no new efforts to improve the data or the methodology have been identified or are necessary. EPA plans to develop regulations for improving reporting of source reduction activities by TRI reporting facilities.

References: *Municipal Solid Waste in the United States: 1999 Facts and Figures*, EPA, July 2001 (EPA 530-R-01-014), http://www.epa.gov/osw/index.htm

FY 2005 Performance Measure

- **Percent of RCRA hazardous waste management facilities with permits or other approved controls in place.**

Performance Database: The Resource Conservation Recovery Act Information System (RCRAInfo) is the national database which supports EPA's RCRA program.

Data Source: Data are entered by the States. Supporting documentation and reference materials are maintained in regional and state files. EPA's Regional offices and authorized states enter data on a rolling basis**.**

Methods, Assumptions and Suitability: The Resource Conservation Recovery Act Information System (RCRAInfo) is the national database which supports EPA's RCRA program. RCRAInfo contains information on entities (generically referred to as "handlers") engaged in hazardous waste (HW) generation and management activities regulated under the portion of RCRA that provides for regulation of hazardous waste. RCRAInfo has several different modules, including status of RCRA facilities in the RCRA permitting universe.

QA/QC Procedures: States and EPA's Regional offices generate the data and manage data quality related to timeliness and accuracy. Within RCRAInfo, the application software enforces structural controls that ensure that high-priority national components of the data are properly entered. RCRAInfo documentation, which is available to all users on-line (at http://www.epa.gov/rcrainfo/) provides guidance to facilitate the generation and interpretation of data. Training on use of RCRAInfo is provided on a regular basis, usually annually, depending on the nature of system changes and user needs. The data that support the performance for the GPRA goals is of far better quality than the handler data in general (including generators). Determination of whether or not the GPRA annual goals are met is based on the legal and operating status codes for each unit (e.g., a facility can have more than one unit). In 1999 and 2000 there was a focused effort to update this information for the baseline facilities in RCRAInfo. RCRAInfo is the sole repository for this information and is a focal point in planning from the local to national level.

Note: Access to RCRAInfo is open only to EPA Headquarters, Regional, and authorized State personnel. It is not available to the general public because the system contains enforcement sensitive data. The general public is referred to EPA's Envirofacts Data Warehouse to obtain filtered information on RCRA-regulated hazardous waste sites.

Data Quality Review: The Government Accounting Office's (GAO's) 1995 Report on EPA's Hazardous Waste Information System http://frebgate access gpo gov/cgibin/ (This historical document is available on the Government Printing Office Website) reviewed whether national RCRA information systems support EPA and states in managing their hazardous waste program. Recommendations coincide with ongoing internal efforts (WIN/Informed) to improve the definitions of data collected, ensure that data collected provide critical information and minimize the burden on states.

Data Limitations: No data limitations have been identified. The states have ownership of their data and EPA has to rely on them to make changes. The data that determine if a facility has met its permit requirements are prioritized in update efforts. Basic site identification data may become out-of-date because RCRA does not mandate annual or other periodic notification by the regulated entity when site name, ownership and contact information changes. Nevertheless, EPA tracks the facilities by their IDs and those should not change even during ownership changes.

Error Estimate: N/A. Currently OSW does not collect data on estimated error rates.

New/Improved Data or Systems: EPA has successfully implemented new tools for managing environmental information to support federal and state programs, replacing the old data systems (the Resource Conservation and Recovery Information System and the Biennial Reporting System) with RCRAInfo. RCRAInfo allows for tracking of information on the regulated universe of RCRA hazardous waste handlers, such as facility status, regulated activities, and compliance history. The system also captures detailed data on the generation of hazardous waste by large quantity generators and on waste management practices from treatment, storage, and disposal facilities. RCRAInfo is web accessible, providing a convenient user interface for Federal, state and local managers, encouraging development of in-house expertise for controlled cost, and using commercial off-the-shelf software to develop reports from database tables.

References: http://www.epa.gov/osw/index.htm

FY2005 Performance Measure:

- **Percentage of UST facilities that are in significant operational compliance with both release detection and release prevention (spill, overfill, and corrosion protection) requirements.**
- **Number of confirmed releases at UST facilities nationally**

Performance Database: The Office of Underground Storage Tanks (OUST) does not maintain a national database; the states maintain their respective databases and/or spreadsheets.

FY 2004 will be the first year of establishing the baseline for the new combined measure, the percentage of UST facilities that are in significant operational compliance with both release detection and release prevention (spill, overfill, and corrosion protection), which will be reported in the FY2005 Annual Report. EPA has previously reported progress in meeting each of these requirements separately. The new combined measure cannot be recalculated using the previous separate measures because there hasn't been a baseline prior to FY 2004. As there is no database for this information, a requirement to recalculate the baseline would be overly burdensome to the states.

Data Source: Designated state agencies submit semi-annual progress reports to the EPA's Regional offices.

Methods, Assumptions and Suitability: N/A

QA/QC Procedures: States submit their performance on an EPA-supplied form for review against national trends and historical data. Previously reported percentages and/or totals are compared to current values and states are notified of any discrepancies and/or anomalies.

Data Quality Review: EPA resolves any discrepancies and/or anomalies in the reported information through written explanations and/or justifications from the states and discussions.

Data Limitations: Percentages reported are sometimes based on estimates and extrapolations from sample data. The quality of the states' data depends on the completeness and accuracy of states' internal recordkeeping.

Error Estimate: Not calculated.

New/Improved Data or Systems: None.

References: FY 2003 Mid-Year Activity Report, June 19, 2003 (updated semi-annually)

STATUTORY AUTHORITIES

Department of Veterans Affairs and Housing and Urban Development and Independent Agencies Appropriation Act, Public Law 105-275; 112 Stat. 2461, 2499 (1998)

Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)

Resource Conservation and Recovery Act (RCRA) of 1976, as amended; (42 U.S.C. 6901-6992k) Public Law 94-580, 42 U.S.C. 6901 et seq.

Solid Waste Disposal Act (SWDA) of 1976, as amended by the Hazardous Waste Amendments of 1984, (Subtitle I); Section 8001(a); Tribal Grants: PL 105-276

OBJECTIVE: Restore Land

By 2008, control the risks to human health and the environment by mitigating the impact of accidental or intentional releases and by cleaning up and restoring contaminated sites or properties to appropriate levels.

Resource Summary
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Restore Land	**$1,454,821.4**	**$1,508,646.8**	**$1,503,465.6**	**($5,181.3)**
Environmental Program & Management	$77,013.7	$78,811.3	$77,204.5	($1,606.8)
Building and Facilities	$2,308.5	$4,179.5	$2,594.2	($1,585.3)
State and Tribal Assistance Grants	$33,997.8	$31,913.1	$32,113.1	$200.00
Leaking Underground Storage Tanks	$70,263.9	$71,005.4	$71,000.5	($4.9)
Oil Spill Response	$14,701.7	$15,289.4	$15,500.6	$211.2
Inspector General	$879.3	$1,069.1	$1,082.2	$13.1
Hazardous Substance Superfund	$1,255,656.6	$1,306,379.0	$1,303,970.4	($2,408.6)
Total Workyears	3,772.7	3,822.6	3,796.7	-25.9

Program Project
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Congressionally Mandated Projects	$3,509.4	$0.0	$0.0	$0.0
Categorical Grant: Hazardous Waste Financial Assistance	$31,017.3	$31,913.1	$32,113.1	$200.0
Compliance Assistance and Centers	$198.6	$279.9	$276.6	($3.3)
LUST / UST	$12,650.6	$10,581.0	$10,499.6	($81.4)
Civil Enforcement	$1,969.7	$2,163.6	$2,135.6	($28.0)
Homeland Security: Preparedness, Response, and Recovery	$37,556.3	$27,339.3	$27,163.2	($176.1)
LUST Cooperative Agreements	$55,798.7	$58,399.1	$58,450.0	$50.9
Oil Spill: Prevention, Preparedness and Response	$12,543.8	$12,897.5	$13,064.7	$167.2
RCRA: Corrective Action	$36,816.6	$40,363.8	$40,975.6	$611.8
Superfund: Emergency Response and Removal	$217,880.1	$199,803.9	$201,088.0	$1,284.1
Superfund: Enforcement	$158,487.3	$155,307.5	$155,537.2	$229.7
Superfund: EPA Emergency Preparedness	$17,926.8	$10,130.1	$10,091.4	($38.7)
Superfund: Federal Facilities	$28,838.1	$32,744.2	$32,182.0	($562.2)
Superfund: Federal Facilities IAGs	$6,749.0	$10,022.6	$10,044.4	$21.8
Superfund: Remedial	$656,387.4	$725,751.1	$719,249.8	($6,501.3)
Superfund: Support to Other Federal Agencies	$10,178.8	$10,676.0	$10,676.0	$0.0
Administrative Projects	$166,319.4	$180,274.1	$179,918.4	($355.8)
TOTAL	**$1,454,827.9**	**$1,508,646.8**	**$1,503,465.6**	**($5,181.3)**

ANNUAL PERFORMANCE GOALS AND MEASURES

Prepare for and Respond to Accidental and Intentional Releases

In 2005 Reduce and control the risks posed by accidental and intentional releases of harmful substances by improving our Nation's capability to prepare for and respond more effectively to these emergencies.

In 2004 Reduce and control the risks posed by accidental and intentional releases of harmful substances by improving our Nation's capability to prepare for and respond more effectively to these emergencies.

In 2003 EPA responded to or monitored 322 significant oil spills in the inland zone and Superfund accomplished 380 removal response actions.

Performance Measures:	**FY 2003 Actuals**	**FY 2004 Pres. Bud.**	**FY 2005 Pres. Bud.**	
Number of Superfund removal response actions initiated.	380	350	350	removals
Oil spills responded to or monitored by EPA.	322	300	300	spills
Number of inspections and exercises conducted at oil storage facilities that are required to have Facility Response Plans.			360	inspections/ exercises
Percentage of emergency response and homeland security readiness improvement.	82.3%	10%	10%	percent

Baseline: Through FY2003, Superfund had initiated approximately 7,900 removal response actions. EPA typically responds to or monitors 300 oil spill cleanups per year. In FY2003, EPA completed evaluations of core emergency response capabilities in each region, and the average score from these was 823 out of a possible 1,000 points so 82.3 percent is used as the baseline for improvements. Between FY 1997 and FY 2003, approximately 31 percent (or 1,862) of the nearly 6,000 oil storage facilities required to have Facility Response Plans were inspected.

Assess and Cleanup Contaminated Land

In 2005 Control the risks to human health and the environment at contaminated properties or sites through cleanup, stabilization, or other action, and make land available for reuse.

In 2004 Control the risks to human health and the environment at contaminated properties or sites through cleanup, stabilization, or other action, and make land available for reuse.

In 2003 Superfund made 917 final site assessment decisions, controlled human exposures at 28 sites and groundwater migration at 54 sites, and achieved 40 construction completions. The RCRA program controlled human exposures at 230 sites and groundwater migration at 175 sites. There were 18,518 LUST cleanups.

Performance Measures:	**FY 2003 Actuals**	**FY 2004 Pres. Bud.**	**FY 2005 Pres. Bud.**	
Number of Superfund final site assessment decisions.	917	475	500	assessments
Number of Superfund construction completions.	40	40	40	completions
Number of Superfund hazardous waste sites with human exposures controlled.	28	10	10	sites
Number of Superfund hazardous waste sites with groundwater migration controlled.	54	10	10	sites
Number of final remedies (cleanup targets) selected at Superfund sites.		20	20	remedies
Number of leaking underground storage tank cleanups completed.	18,518	21,000	21,000	cleanups
Number of high priority RCRA facilities with human exposures to toxins controlled.	230	166	225	facilities
Number of high priority RCRA facilities with toxic releases to groundwater controlled.	175	129	203	facilities

Baseline: By the end of FY 2003, Superfund had initiated approximately 7,900 removal response actions, controlled human exposures at 82% (1,227 of 1,494) of eligible NPL sites and controlled groundwater migration at 65% (826 of 1,275) of eligible NPL sites, and completed construction at 58% (886) of the NPL sites. Of the 1,714 RCRA Corrective Action high priority facilities, 73% (1,246) have human exposures controlled, an increase from 1,018 facilities with human exposures controlled at the end of FY 2002; and 61% (1,049) have groundwater migration controlled, an increase from 877 facilities with groundwater migration controlled at the end of FY 2002. Furthermore, at the end of FY 2001 there were 814 facilities with human exposures controlled and 737 facilities groundwater migration controlled reflecting the strong EPA/state partnership in this program. At the end of FY 2003, 303,120 cleanups of confirmed releases from Federally-regulated leaking underground storage tanks were completed since 1987. At the end of FY 2002, there was a universe of 1,103 Superfund sites with final remedies selected. The Agency is currently evaluating this baseline and may adjust it downward in the future.

Superfund Cost Recovery

In 2005 Ensure trust fund stewardship by getting PRPs to initiate or fund the work and recover costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL and non-NPL sites with a statute of limitations (SOL) on total past costs equal to or greater than $200,000.

In 2004 Ensure trust fund stewardship by getting PRPs to initiate or fund the work and recover costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL and non-NPL sites with a statute of limitations (SOL) on total past costs equal to or greater than $200,000.

In 2003 Ensured trust fund stewardship by getting PRPs to initiate or fund the work and recover costs from PRPs when EPA expends trust fund monies. Addressed cost recovery at all NPL and non-NPL sites with a statute of limitations (SOL) on total past costs equal to or greater than $200,000.

Performance Measures:	**FY 2003 Actuals**	**FY 2004 Pres. Bud.**	**FY 2005 Pres. Bud.**	
Refer to DOJ, settle, or write off 100% of Statute of Limitations (SOLs) cases for SF sites with total unaddressed past costs equal to or greater than $200,000 and report value of costs recovered.	100	100	100	Percent

Baseline: In FY 98 the Agency addressed 100 percent of cost recovery at all NPL & non-NPL sites with total past costs equal or greater than $200,000.

Superfund Potentially Responsible Party Participation

In 2005 Reach a settlement or take an enforcement action before the start of a remedial action at 90 percent of Superfund sites having a viable, liable responsible party other than the federal government.

In 2004 Reach a settlement or take an enforcement action before the start of a remedial action at 90 percent of Superfund sites having a viable, liable responsible party other than the federal government.

In 2003 Maximized all aspects of PRP participation which included maintaining PRP work at 87% of the new remedial construction starts at non-Federal Facility Superfund, and emphasized fairness in the settlement process.

Performance Measures:	**FY 2003 Actuals**	**FY 2004 Pres. Bud.**	**FY 2005 Pres. Bud.**	
PRPs conduct 70% of the work at new construction starts	87			Percent
Percentage of Superfund sites at which settlement or enforcement action taken before the start of RA.		90	90	Percent

Baseline: In FY 98 approximately 70% of new remedial work at NPL sites (excluding Federal facilities) was initiated by private parties. In FY2003, a settlement was reached or an enforcement action was taken with non-Federal PRPs before the start of the remedial action at approximately 90 percent of Superfund sites.

VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

FY 2005 Performance Measures:

- **Number of final Superfund site assessment decisions.**
- **Number of Superfund hazardous waste sites with human exposures controlled.**
- **Number of Superfund hazardous waste sites with groundwater migration controlled.**
- **Number of final remedies (cleanup targets) selected at Superfund sites.**
- **Number of Superfund construction completions.**
- **Number of Superfund removal response actions initiated.**

Performance Database: The Comprehensive Environmental Response, Compensation, and Liability System (CERCLIS) is the database used by the Agency to track, store, and report Superfund site information.

Data Source: CERCLIS is an automated EPA system; headquarters and EPA's Regional offices enter data into CERCLIS on a rolling basis.

Methods, Assumptions and Suitability: Each performance measure is a specific variable within CERCLIS.

QA/QC Procedures: To ensure data accuracy and control, the following administrative controls are in place: 1) Superfund Implementation Manual (SPIM), the program management manual that details what data must be reported; 2) Report Specifications, which are published for each report detailing how reported data are calculated; 3) Coding Guide, which contains technical instructions to such data users as Regional Information Management Coordinators (IMCs), program personnel, report owners, and data input personnel; 4) Quality Assurance (QA) Unit Testing, an extensive QA check against report specifications; 5) Regional CERCLIS Data Entry Internal Control Plan, which includes: (a) regional policies and procedures for entering data into CERCLIS; (b) a review process to ensure that all Superfund accomplishments are supported by source documentation; (c) delegation of authorities for approval of data input into CERCLIS; and (d) procedures to ensure that reported accomplishments meet accomplishment definitions; and (6) a historical lockout feature has been added to CERCLIS so that changes in past fiscal year data can be changed only by approved and designated personnel and are logged to a change-log report.

CERCLIS 3/WasteLAN operation and further development is taking place under the following administrative control quality assurance procedures: 1) OIRM Life Cycle Guidance; 2) OSRTI Quality Management Plan; 3) Agency platform, software and hardware standards (NTSD); 4) Quality Assurance Requirements in all contract vehicles under which CERCLIS 3/WasteLAN is being developed and maintained; and 5) Agency security procedures. In addition, specific controls are in place for system design, data conversion and data capture, and CERCLIS 3/WasteLAN outputs.

Data Quality Reviews: Two audits, one by the Office Inspector General (OIG) and the other by General Accounting Office (GAO), were done to assess the validity of the data in CERCLIS. The OIG audit report, *Superfund Construction Completion Reporting* (No. E1SGF7_05_0102_ 8100030), dated December 30, 1997, was prepared to verify the accuracy of the information that the Agency was providing to Congress and the public. The OIG report concluded that the Agency "has good management controls to ensure accuracy of the information that is reported," and "Congress and the public can rely upon the information EPA provides regarding construction completions." Further information on this report are available at http://www.epa.gov/oigearth/eroom.htm. The GAO's report, *Superfund Information on the Status of Sites* (GAO/RECD-98-241), dated August 28, 1998, was prepared to verify the accuracy of the information in CERCLIS on sites' cleanup progress. The report estimates that the cleanup status of National Priority List sites reported by CERCLIS as of September 30, 1997, is accurate for 95 percent of the sites. Additional information on the *Status of Sites* may be obtained by visiting http://www.gao.gov. Another OIG audit, *Information Technology - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality* (Report No. 2002-P-00016), dated September 30, 2002, evaluated the accuracy, completeness, timeliness, and consistency of the data entered into CERCLIS. The weaknesses identified were caused by the lack of an effective quality assurance process and adequate internal controls for CERCLIS data quality. The report provided 11 recommendations to improve controls for CERCLIS data quality. OSWER concurs with the recommendations contained in the audit, and many of the identified problems have been corrected or actions that would address these recommendations are underway. Additional information about this report is available at http://www.epa.gov/oigearth/eroom.htm.

The IG reviews annually the end-of-year Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) data, in an informal process, to verify the data supporting the performance measures. Typically, there are no published results.

The Quality Management Plan (QMP) for the Office of Solid Waste and Emergency Response (OSWER) is currently under review by the Office of Environmental Information.

Data Limitations: Weaknesses were identified in the OIG audit, *Information Technology - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality* (Report No.

2002-P-00016), dated September 30, 2002. The weaknesses identified were caused by the lack of an effective quality assurance process and adequate internal controls over CERCLIS data quality. The report provided 11 recommendations with which OSWER concurs. Many of the identified problems have been corrected or actions that would address these recommendations are underway, e.g., 1) FY 02/03 SPIM Chapter 2 update was made to better define the Headquarters and Regional roles and responsibilities for maintaining planning and accomplishment data in CERCLIS; 2) draft guidance from OCA (Other Cleanup Activity) subgroup, which outlines the conditions under which sites are taken back from states when states have the lead but are not performing and 3) Pre-CERCLIS Screening: A Data Entry Guide, which provides guidance to the regions for preventing entry of duplicate sites in CERCLIS. The development and implementation of a quality assurance process for CERCLIS data has begun. This process includes delineating quality assurance responsibilities in the program office and periodically selecting random samples of CERCLIS data points to check against source documents in site files.

Error Estimate: The GAO's report, "*Superfund Information on the Status of Sites*" (GAO/RECD-98-241), dated August 28, 1998, estimates that the cleanup status of National Priority List sites reported by CERCLIS is accurate for 95 percent of the sites.

New/Improved Data or Systems: A CERCLIS modernization effort is currently underway to enhance CERCLIS, with a focus on data collection and data analysis and how to best satisfy the current needs of the Superfund program. Among other initiatives, this effort includes reviewing current and anticipated data needs. Items in CERCLIS that are no longer needed will be deleted, and new items identified will be added. Strict standards for quality will be enforced. During FY 2004, the CERCLIS database will be made Intranet accessible, and perhaps, Internet accessible, using CITRIX. This will make it easier to access the database and will simplify the SNAPSHOT process. This change will improve database reliability since there will no longer be 10 separate CERCLIS installations on servers maintained by regional IRM shops. The Superfund eFacts system is a vital part of the CERCLIS modernization efforts. The Superfund eFacts system is an e-Government solution design to give EPA management and staff quick and easy access to important milestones relating to various aspects of the Superfund program. In 2005, the Agency will continue its efforts begun in 1999 to improve the Superfund program's technical information by increasing reliance upon CERCLIS support data systems, which incorporate more site remedy selection, risk, removal response, and community involvement information. Efforts to share information among the Federal, state, and Tribal programs to further enhance the Agency's efforts to efficiently identify, evaluate, and remediate Superfund hazardous waste sites will continue. In 2005, the Agency will also establish data quality objectives for program planning purposes and to formulate the organization's information needs for the next 5 years. Adjustments will be made to EPA's current architecture and business processes to better meet those needs.

References: References include OIG audit reports, *Superfund Construction Completion Reporting*, (No. E1SGF7_05_0102_ 8100030) and *Information Technology - Comprehensive* FY 2005 Performance Measures *Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality*, (No. 2002-P-00016), http://www.epa.gov/oigearth/eroom.htm; and the GAO report, *Superfund Information on the Status of Sites* (GAO/RECD-98-241), http://www.gao.gov. Other references include the Superfund/Oil Implementation Manuals for the fiscal years 1987 to the current manual, the Annual Performance Report to Congress, and the Office of Superfund Remediation and Technology Innovation's Information Management Center's Quality Assurance Procedures for the Official Superfund Data Base, CERCLIS 3/WasteLAN.

FY 2005 Performance Measures

- **Number of leaking underground storage tank cleanups completed.**

Performance Database: The Office of Underground Storage Tanks (OUST) does not maintain a national database; the states maintain their respective databases and/or spreadsheets.

Data Source: Designated state agencies submit semi-annual progress reports to the EPA's Regional offices.

Methods, Assumptions and Suitability: N/A

QA/QC Procedures: States submit their performance on an EPA-supplied form for review against national trends and historical data. Previously reported percentages and/or totals are compared to current values and states are notified of any discrepancies and/or anomalies.

Data Quality Review: EPA resolves any discrepancies and/or anomalies in the reported information through written explanations and/or justifications from the states and discussions.

Data Limitations: Percentages reported are sometimes based on estimates and extrapolations from sample data. The quality of the states' data depends on the completeness and accuracy of states' internal recordkeeping.

Error Estimate: Not calculated.

New/Improved Data or Systems: None.

References: FY 2003 Mid-Year Activity Report, June 19, 2003 (updated semi-annually)

FY 2005 Performance Measures:

- **High priority RCRA facilities with human exposures to toxins controlled**
- **High priority RCRA facilities with toxic releases to groundwater controlled**

Performance Database: The Resource Conservation Recovery Act Information System (RCRAInfo) is the national database which supports EPA's RCRA program.

Data Source: Data are entered by the States. A "yes" or "no" entry is made in the database with respect to meeting corrective action indicators. Supporting documentation and reference materials are maintained in Regional and state files. EPA's Regional offices and authorized states enter data on a rolling basis.

Methods, Assumptions and Suitability: RCRAInfo has several different modules, including a Corrective Action Module that tracks the status of facilities that require, or may require, corrective actions. RCRAInfo contains information on entities (generically referred to as "handlers") engaged in hazardous waste (HW) generation and management activities regulated under the portion of RCRA that provides for regulation of hazardous waste. Human exposures controlled and toxic releases to groundwater controlled are used to summarize and report on the facility-wide environmental conditions at the RCRA Corrective Action Program's highest priority facilities. The environmental indicators are used to track the RCRA program's progress in getting highest priority contaminated sites under control. Known and suspected sitewide conditions are evaluated using a series of simple questions and flow-chart logic to arrive at a reasonable, defensible determination. These questions were issued as a memorandum titled:
Interim Final Guidance for RCRA Corrective Action Environmental Indicators, Office of Solid Waste, February 5, 1999). Lead regulators for the site (authorized state or EPA) make the environmental indicator determination; however, facilities or their consultants may assist EPA in the evaluation by providing information on the current environmental conditions.

QA/QC Procedures: States and Regions generate the data and manage data quality related to timeliness and accuracy (i.e., the environmental conditions and determinations are correctly reflected by the data). Within RCRAInfo, the application software enforces structural controls that ensure that high-priority national components of the data are properly entered. RCRAInfo documentation, which is available to all users on-line, provides guidance to facilitate the generation and interpretation of data. Training on use of RCRAInfo is provided on a regular basis, usually annually, depending on the nature of systems changes and user needs.

Note: Access to RCRAInfo is open only to EPA Headquarters, Regional, and authorized State personnel. It is not available to the general public because the system contains enforcement sensitive data**.** The general public is referred to EPA's Envirofacts Data Warehouse to obtain filtered information on RCRA-regulated hazardous waste sites.

Data Quality Review: GAO's 1995 Report on EPAs Hazardous Waste Information System (http://frwebgate.access.gpo.gov/) reviewed whether national RCRA information systems support EPA and the states in managing their hazardous waste programs.

Data Limitations: No data limitations have been identified. As discussed above, environmental indicator determinations are made by the authorized states and EPA Regions based on a series of standard questions and entered directly into RCRAInfo. EPA has provided guidance and training to states and Regions to help ensure consistency in those determinations. High priority facilities are monitored on a facility-by-facility basis and the QA/QC procedures identified above are in place to help ensure data validity.

Error Estimate: N/A. Currently, the Office of Solid Waste does not collect data on estimated error rates.

New/Improved Data or Systems: EPA has successfully implemented new tools for managing environmental information to support federal and state programs, replacing the old data systems (the Resource Conservation and Recovery Information System and the Biennial Reporting System) with RCRAInfo. RCRAInfo allows for tracking of information on the regulated universe of RCRA hazardous waste handlers, such as facility status, regulated activities, and compliance history. The system also captures detailed data on the generation of hazardous waste from large quantity generators and on waste management practices by treatment, storage, and disposal facilities. RCRAInfo is web-accessible, providing a convenient user interface for federal, state and local managers, encouraging development of in-house expertise for controlled cost, and using commercial off-the-shelf software to develop reports from database tables.

References: GAO's 1995 Report on EPA's Hazardous Waste Information System reviewed whether national RCRA information systems support EPA and the states in managing their hazardous waste programs. Recommendations coincide with ongoing internal efforts (WIN/Informed) to improve the definitions of data collected, ensure that data collected provide critical information and minimize the burden on states. This historical document is available on the Government Printing Office Website (http://frwebgate.access.gpo.gov/)

FY 2005 Performance Measure:

- **Percentage of emergency response and homeland security readiness improvement.**

Performance Database: No specific database has been developed. Data from evaluations are tabulated and stored using standard software (WordPerfect, spreadsheets, etc.)

Data Source: Data are collected through detailed surveys and interviews of personnel and managers in each program office. The survey instrument was developed based upon Core Emergency Response (ER) elements, and has been approved by EPA Headquarters and Regional managers.

Methods, Assumptions and Suitability: The Core ER elements were developed over the last several years by the EPA Removal Program to identify and clarify what is needed to ensure an excellent emergency response program. The elements, definitions, and rationales were developed by staff and managers and have been presented to the Administrator and other high level Agency managers. Based on the Core ER standards, evaluation forms and criteria were established for EPA's Regional programs, the Environmental Response Team (ERT), and Headquarters. These evaluation criteria identify what data need to be collected, and how that data translate into an appropriate score for each Core ER element. The elements and evaluation criteria will be reviewed each year for relevance to ensure that the programs have the highest standards of excellence and that the measurement clearly reflects the level of readiness. The data are collected from each Regional office, ERT, and Headquarters using a systematic, objective process. Each evaluation team consists of managers and staff, from Headquarters and from another EPA Regional office, with some portion of the team involved in all reviews for consistency and some portion varying to ensure independence and objectivity. For instance, a team evaluating Region A might include some or all of the following: a staff person from Headquarters who is participating in all reviews, a staff person from Headquarters who is very familiar with Region A activities, a manager from Headquarters, and a staff person and/or manager from Region B. One staff or group will be responsible for gathering and analyzing all the data to determine the overall score for each Regional office, ERT, and Headquarters, and for determining an overall National score.

QA/QC Procedures: See "Methods, Assumptions and Suitability"

Data Quality Review: The evaluation team will review the data (see Methods, Assumptions and Suitability) during the data collection and analysis process. Additional data review will be conducted after the data has been analyzed to ensure that the scores are consistent with the data and program information. There currently is no specific database that has been developed to collect, store, and manage the data.

Data Limitations: One key limitation of the data is the lack of a dedicated database system to collect and manage the data. Standard software packages (word processing, spreadsheets) are used to develop the evaluation criteria, collect the data, and develop the accompanying readiness scores.

Error Estimate: It is likely that the error estimate for this measure will be small for the following reasons: the standards and evaluation criteria have been developed and reviewed extensively by Headquarters and EPA's Regional managers and staff; the data will be collected by a combination of managers and staff to provide consistency across all reviews plus an important element of objectivity in each review; the scores will be developed by a team looking across all ten Regions, ERT, and Headquarters; and only twelve sets of data will be collected, allowing for easier cross-checking and ensuring better consistency of data analysis and identification of data quality gaps.

New/Improved Data or Systems: There are no current plans to develop a dedicated system to manage the data.

References: FY 2003 Core Emergency Response Report, based on Regional and Headquarters evaluations (for internal EPA use only).

FY 2005 Performance Measures:

- **Number of inspections and exercises conducted at oil storage facilities required to have Facility Response Plans**
- **Oil spills responded to or monitored by EPA**

Performance Database: The Comprehensive Environmental Response, Compensation, and Liability System (CERCLIS) is the database used by the Agency to track, store, and report Superfund site information. Historically, oil program performance has been reported in CERCLIS; a new, more streamlined reporting system is being developed in 2004 to store oil spill prevention, emergency preparedness and response information. Information included in the new database will be similar to CERCLIS, but definitions and activities pertaining to oil will be included to support oil spill program needs for FY 2004 and beyond.

Data Source: Automated EPA system; Headquarters and Regional offices enter data (Currently CERCLIS, has a new system pending).

Methods, Assumptions and Suitability: Each performance measure is a specific variable within CERCLIS.

QA/QC Procedures: N/A

Data Quality Reviews: N/A
Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: The Superfund/Oil Implementation Manual, 1987. This is being revised as part of the development of the new database.

FY 2005 Performance Measures:

- **Refer to DOJ, settle, or writeoff 100% of Statute of Limitations (SOLs) cases for Superfund sites with total unaddressed past costs equal to or greater than $200,000 and report value of costs recovered.**

Performance Database: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)

Data Source: Automated EPA system; Headquarters and EPA's Regional offices enter data into CERCLIS

Methods, Assumptions and Suitability: The data used to support this measure are collected on a fiscal year basis only. Enforcement reports are run at the end of the fiscal year, and the data that support this measure are extracted from the report.

QA/QC Procedures: Office of Site Remediation Enforcement (OSRE) Quality Management Plan, approved April 11, 2001. To ensure data accuracy and control, the following administrative controls are in place: 1) Superfund/Oil Implementation Manual (SPIM), a program management manual that details what data must be reported; 2) Report specifications, which are published for each report detailing how reported data are calculated; 3) Coding Guide, which contains technical instructions to such data users as Regional Information Management Coordinators (IMCs), program personnel, report owners, and data input personnel; 4) Quality Assurance (QA) Unit Testing, an extensive QA check against report specifications; 5) QA Third Party Testing, an extensive test made by an independent QA tester to ensure that the report produces data in conformance with the report specifications; 6) Regional CERCLIS Data Entry Internal Control Plan, which includes: a) regional policies and procedures for entering data into CERCLIS, b) a review process to ensure that all Superfund accomplishments are supported by source documentation, c) delegation of authorities for approval of data input into CERCLIS, and, d) procedures to ensure that reported accomplishments meet accomplishment definitions; and 7) a historical lockout feature that has been added to CERCLIS so that changes in past fiscal year data can be changed only by approved and designated personnel and are logged to a change-log report.

Data Quality Review: The IG annually reviews the end-of-year CERCLA data, in an informal process, to verify the data supporting the performance measure. Typically, there are no published results.

Data Limitations: None

Error Estimate: NA

New/Improved Data or Systems: None

References: Office of Site Remediation Enforcement (OSRE) Quality Management Plan, approved April 11, 2001

FY 2005 Performance Measures:

- **Reach a settlement or take an enforcement action before the start of a remedial action at 90 percent of Superfund sites having viable, liable responsible parties other than the Federal government.**

Performance Database: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS).

Data Source: Automated EPA system; headquarters and regional offices enter data into CERCLIS

Methods, Assumptions and Suitability: There are no analytical or statistical methods used to collect the information. The data used to support this measure are collected on a fiscal year basis only. Enforcement reports are run at the end of the fiscal year, and the data that support this measure is extracted from the report.

QA/QC Procedures: Office of Site Remediation Enforcement (OSRE) Quality Management Plan, approved April 11, 2001. To ensure data accuracy and control, the following administrative controls are in place: 1) Superfund/Oil Implementation Manual (SPIM), a program management manual that details what data must be reported; 2) Report Specifications, which are published for each report detailing how reported data are calculated; 3) Coding Guide, which contains technical instructions to such data users as Regional Information Management Coordinators (IMCs), program personnel, report owners, and data input personnel; 4) Quality Assurance (QA) Unit Testing, an extensive QA check against report specifications; 5) QA Third Party Testing, an extensive test made by an independent QA tester to ensure that the report produces data in conformance with the report specifications; 6) Regional CERCLIS Data Entry Internal Control Plan, which includes: a) regional policies and procedures for entering data into CERCLIS, b) a review process to ensure that all Superfund accomplishments are supported by source documentation, c) delegation of authorities for approval of data input into CERCLIS, and, d) procedures to ensure that reported accomplishments meet accomplishment definitions; and 7) a historical lockout feature that has been added to CERCLIS so that changes in past fiscal year data can be changed only by approved and designated personnel and are logged to a change-log report.

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Data Limitations: None

Error Estimate: NA

New/Improved Data or Systems: None

References: Office of Site Remediation Enforcement (OSRE) Quality Management Plan, approved April 11, 2001.

STATUTORY AUTHORITIES

Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. (1970), and Reorganization Plan #3 of 1970
Clean Water Act
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. 9601-9657
Community Environmental Response Facilitation Act (CERFA)
Defense Base Closure and Realignment Act of 1990, and the Defense Authorization Amendments and Base Realignment and Closure Act (BRAC) of 1990, Section 2905(a)(1)(E) (10 U.S.C. 2687 Note)
Departments of Veterans Affairs, Housing and Urban Development, and Independent Agencies Appropriations Act of 1999, Public Law 105-276, (112 Stat. 2461, 2499; 42 U.S.C. 6908a).
Executive Order 12241 of September 1980, National Contingency Plan, 3 CFR, 1980
National Environmental Policy Act (NEPA)
Oil Pollution Act 33 U.S.C.A.
Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)
Public Health Service Act, as amended, 42 U.S.C. 201 et seq.
Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, 42 U.S.C. 5121 et seq.
Safe Drinking Water Act, 42 U.S.C. 300F et seq. (1974)
Solid Waste Disposal Act as amended by Hazardous and Solid Waste Amendments of 1984 to the Resource Conversation and Recovery Act of 1976
Uranium Mill Tailings Radiation Land Withdrawal Act of 1978
Executive Order 12656 of November 1988, Assignment of Emergency Preparedness Responsibilities, 3 CFR, 1988
Executive Order 12580 of January 1987, Superfund I

OBJECTIVE: Enhance Science and Research

Through 2008, provide and apply sound science for protecting and restoring land by conducting leading-edge research and developing a better understanding and characterization of environmental outcomes under Goal 3.

Resource Summary
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Enhance Science and Research	**$46,531.6**	**$59,836.6**	**$57,555.6**	**($2,280.9)**
Environmental Program & Management	$3,117.4	$3,026.1	$2,983.2	($42.9)
Hazardous Substance Superfund	$25,144.1	$43,883.3	$42,840.8	($1,042.5)
Leaking Underground Storage Tanks	$682.4	$730.6	$736.7	$6.1
Oil Spill Response	$881.0	$919.4	$924.4	$5.0
Science & Technology	$15,798.6	$10,374.9	$9,112.3	($1,262.6)
Buildings and Facilities	$812.0	$823.0	$886.9	$63.9
Inspector General	$96.1	$79.1	$71.3	($7.7)
Total Workyears	184.8	181.4	186.4	5.0

Program Project
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Congressionally Mandated Projects	$5,963.3	$0.0	$0.0	$0.0
Superfund: Remedial	$0.0	$6,291.5	$6,234.0	($57.5)
Research: Land Protection and Restoration	$25,122.8	$36,568.5	$33,059.3	($3,509.2)
Research: SITE Program	$4,781.1	$6,941.1	$6,927.7	($13.4)
Administrative Projects	$10,664.4	$10,035.5	$11,334.6	$1,299.2
TOTAL	**$46,531.6**	**$59,836.6**	**$57,555.6**	**($2,280.9)**

ANNUAL PERFORMANCE GOALS AND MEASURES

Research

Scientifically Defensible Decisions for Site Clean

In 2005 Complete at least four SITE demonstrations, with emphasis on NAPLs and sediments, in order to, by 2010, develop or evaluate 40 scientific tools, technologies, methods, and models, and provide technical support that enable practitioners to 1) characterize the nature and extent of multimedia contamination; 2) assess, predict, and communicate risks to human health and the environment; 3) employ improved remediation options; and 4) respond to oil spills effectively.

In 2004 Provide risk assessors and managers with site-specific data sets on three applications detailing the performance of conventional remedies for contaminated sediments to help determine the most effective techniques for remediating contaminated sites and protecting human health and the environment.

In 2003 Delivered state-of-the-science report and methods to EPA and other stakeholders for risk management of fuel oxygenates; organic and inorganic contamination of sediments, ground water and/or soils; and oil spills to ensure cost-effective and technically sound site clean-up.

Performance Measures:	**FY 2003 Actuals**	**FY 2003 Actuals**	**FY 2003 Actuals**	
Complete draft of the FY 2002 Annual SITE Report to Congress.	1			draft report
Reports on performance data for conventional sediment remedies for three sites.		3		reports
SITE demonstrations completed			4	demonstrations

Baseline: This APG will contribute to an array of assessment and remediation options targeted to addressing situations where uncertainty remains high, technology performance is lacking, or where existing options are cost- or time intensive. Through FY 2005, non-aqueous phase liquids (NAPLs) and contaminated sediments will be of special interest because of the cost and complexity of assessing and remediating these sites, as well as the risks they pose to public health. EPA estimates that approximately 20% of National Priorities List (NPL) sites have contaminated sediments with risk from a number of toxic substances (http:www.epa.gov/superfund/resources/sediment/index.htm). Available remedies are unproven, expensive to implement, or both. The SITE program evaluates tools, technologies, and approaches for remediation, measurement, and monitoring. The innovative approaches that are evaluated are largely developed in the private sector. The purpose of the program is to provide an independent assessment of performance, so that site decision-makers can gain confidence in selecting an innovative approach. Since the inception of the SITE program in 1986, clean-up of contaminated sites through the use of innovative technologies has resulted in an estimated net cost savings of $2.4 billion (http://www.epa.gov/ORD/SITE/congress/540R03502/540R03502.htm). Beginning in FY 2005, regular evaluations by independent and external panels will provide reviews of EPA research programs' relevance, quality, and successful performance to date, in accordance with OMB's Investment Criteria for Research and Development. Reviewers will also qualitatively determine whether EPA has been successful in meeting its annual and long-term commitments for research. Recommendations and results from these reviews will improve the design and management of EPA research programs and help to measure their progress under the Government Performance and Results Act (GPRA).

VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

FY 2005 Performance Measure:

SITE demonstrations completed

Performance Database: Program output; no internal tracking system

Data Source: N/A

Methods, Assumptions and Suitability: N/A

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: N/A

STATUTORY AUTHORITIES

Brownfields Revitalization and Environmental Restoration Act
Comprehensive Environmental Response, Compensation, and Liabilities Act (CERCLA)
Hazardous and Solid Waste Amendments (HSWA)
Oil Pollution Act (OPA)
Resource Conservation and Recovery Act (RCRA)
Solid Waste Disposal Act (SWDA)
Superfund Amendments and Reauthorization Act